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(54) **Optical signal power detection with signature bit pattern in WDM systems**

(57) The power of an optical signal (s_1) travelling on a channel (λ_1) of a WDM transmission system, is measured using a signature bit pattern (s_{BP1}) which is inserted in the frame of the optical signal (s_1). The power level of s_{BP1} is adjusted at the launching point to a predetermined ratio (m) with the power of the optical signal. At a point of interest, the fiber is tapped and a fraction of

the tapped signal, that includes a corresponding fraction of s_{BP1} , is converted to an electrical signal. The fraction of s_{BP1} is extracted from the electrical signal and power of s_{BP1} is measured. This gives the optical power of s_1 as (m) is known and also the calibration constant for the respective channel (λ_1) is known. The method can be applied for any and all channels of the WDM transmission system.

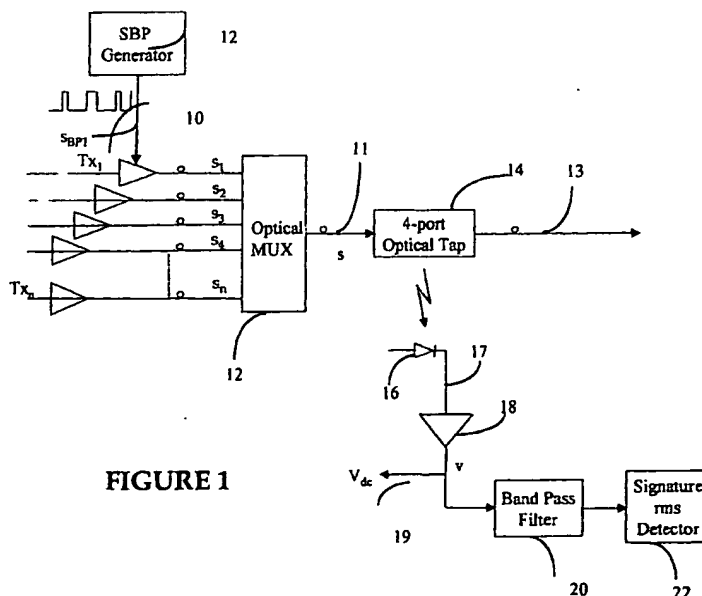


FIGURE 1

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EUROPEAN SEARCH REPORT

Application Number
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			H04B H04J
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 March 2001	Examiner Ribbe, A
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document	
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